

Patent claims.

1. An apparatus for removing surface regions from a component,
- 5 which has a vessel in which an electrolyte is arranged, into which the component can be introduced, which has an electrode, it being possible for the electrode and the component to be electrically connected to one another, and
- 10 the electrode being arranged at least partially in the electrolyte,

characterized in that

- 15 the apparatus has an electrical current pulse generator (16), which can be electrically connected between electrode (10) and component (13), in that the current pulse generator (16) can generate current pulses, and
- 20 in that the apparatus (1) has an ultrasound probe (14), which is arranged in the container (4), and which is surrounded by the electrolyte (10).

2. A process for removing a coating from a surface region of a component,
in which an electrode and the component are arranged in
an electrolyte, the electrode and the component being
5 electrically conductively connected to one another and
to a current generator (16),

characterized in that

10 the current generator (16) generates a pulsed current
or a pulsed voltage, and
in that for the electrolytic coating removal a
plurality of current/voltage pulses (40) are used
repeatedly combined in a sequence (34),
15 the sequence (34) being formed by at least two
different blocks (77), one block (77) comprising at
least one current pulse (40).

3. The process as claimed in claim 2,
20 characterized in that

a positive or a negative potential is applied to the
component (13) in order to generate a base current or
base voltage.

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4. The process as claimed in claim 2,
characterized in that

30 an ultrasound probe (19) is operated in the electrolyte
(7).

5. The process as claimed in claim 2,
characterized in that

5 a current/voltage pulse (40) is used for the
electrolytic coating removal, with both positive and
negative current/voltage pulses (40) being used.

6. The process as claimed in claim 2,
characterized in that

10 a block (77) is defined by a number of current pulses
(40), pulse duration (t_{on}), pulse interval (t_{off}),
current level (I_{max}) and pulse shape.

15 7. The process as claimed in claim 2,
characterized in that

20 a block (77) is in each case matched to a constituent
of an alloy which is to be removed in order to boost
the removal of the constituent of the alloy.

8. The process as claimed in claim 2,
characterized in that

25 the coating removed is an alloy layer of MCrAlY type,
where M is an element selected from the group
consisting of iron, cobalt or nickel.

9. The process as claimed in claim 2,
characterized in that

a base current is superimposed on the current pulses
5 (40) and/or the intervals.